

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) An automatic urine disposal device for discharging urine collected in a urine receptacle into a urine tank by using a vacuum pump, wherein said urine receptacle comprises:

a substantially rectangular, non-breathable outer sheet having side faces extending upwardly or downwardly from two opposed sides of the bottom surface,

a urine absorbent material housed in said outer sheet, and

a hard-breathable top sheet disposed on top of the surface of said urine absorbent material;

said urine tank being tightly sealed, a first urine drainage means formed on the bottom surface of said outer sheet, a second urine drainage means connected to said first urine drainage means to direct urine into said urine tank, and said vacuum pump creating a vacuum in said urine tank.

2. (Original) An automatic urine disposal device according to claim 1, wherein said urine receptacle keeps said urine absorbent material highly airtight and said vacuum pump absorbs air from said urine tank.

3. (Original) An automatic urine disposal device according to claim 1, wherein said outer sheet is liquid-impermeable, a liquid-permeable top sheet adheres to the upper end of the edge portion of said outer sheet to keep said urine absorbent material airtight, said vacuum pump makes pressure in said first urine drainage

means negative, and a urine sensor is provided to detect that urine has been absorbed by said urine absorbent material and activate said vacuum pump.

4. (Original) An automatic urine disposal device according to claim 1, wherein a hard-breathable top sheet is disposed on top of the surface of said urine absorbent material to keep said urine absorbent material highly airtight, a lid for sealing said urine tank is provided, and a urine sensor is also provided to detect that urine has been absorbed by said urine absorbent material and activate said vacuum pump.

5. (Original) An automatic urine disposal device according to claim 4, wherein layers of urine absorbent material are laminated and housed in said outer sheet so that the water-absorbent capability of the bottom-surface side urine absorbent material may be large.

6. (Original) An automatic urine disposal device according to claim 5, wherein said urine absorbent material has two layers and an accordion-folded balloon stretchable and contractible along the surface of said urine absorbent material by air blast is disposed between said urine absorbent material and said top sheet.

7. (Original) An automatic urine disposal device according to claim 4, wherein said top sheet is disposed such that it can come in contact with a wearer's urinating part.

8. (Original) An automatic urine disposal device according to claim 1, wherein the cross section of said urine receptacle is of forked shape, letter U shape, or letter

Ω shape.

9. (Original) An automatic urine disposal device according to claim 4, wherein said urine receptacle has a perforated urine drainage tube which abuts on said urine absorbent material and has a large number of urine drainage pores for discharging urine and a support sheet which supports said perforated urine drainage tube, and urine is drained through said perforated urine drainage tube into said urine tank.

10. (Original) A urine receptacle used for an automatic urine disposal device to absorb urine discharged from a wearer's urinating part, wherein said urine receptacle comprises:

a substantially rectangular, liquid-impermeable, non-breathable outer sheet having a fork-shaped, letter-U-shaped, or letter-Ω-shaped cross section and having a urine drainage means on the bottom surface thereof,

a urine absorbent material housed in said outer sheet, and

a hard-breathable top sheet disposed such that it covers the surface of said urine absorbent material.

11. (Original) A urine receptacle according to claim 10, further comprising gathers provided along the periphery of said outer sheet.

12. (Original) A urine receptacle according to claim 11, wherein said top sheet is liquid-permeable and said gathers are slanted inwardly along the periphery of said outer sheet.

13. (Original) A urine receptacle according to claim 11, wherein an accordion-folded balloon stretchable and contractible along the surface of said urine absorbent material by air blast is disposed between said urine absorbent material and said top sheet.

14. (New) A urine receptacle according to claim 10, wherein said top sheet has a breathability measured according to the General Textile Testing Method's breathability testing method A prescribed in JIS L 1096, 6.27.1 from 0 to 50 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is moist and from 20 to 100 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is dry.

15. (New) A urine receptacle according to claim 10, wherein said top sheet has a breathability measured according to the General Textile Testing Method's breathability testing method A prescribed in JIS L 1096, 6.27.1 from 0 to 50 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is moist and from 20 to 50 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is dry.

16. (New) An automatic urine disposal device according to claim 1, wherein said top sheet has a breathability measured according to the General Textile Testing Method's breathability testing method A prescribed in JIS L 1096, 6.27.1 from 0 to 50 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is moist and from 20 to 100 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is dry.

17. (New) An automatic urine disposal device according to claim 1, wherein said top sheet has a breathability measured according to the General Textile Testing Method's breathability testing method A prescribed in JIS L 1096, 6.27.1 from 0 to 50 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is moist and from 20 to 50 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is dry.

18. (New) An automatic urine disposal device comprising

a urine receptacle having

an outer sheet having a substantially rectangular shape and having a U-shaped cross-section, having a width at the middle portion in the longitudinal direction being narrow, so that it is shaped like an hourglass, and having a gather provided along its periphery, formed of a liquid-impermeable and non-breathable thin sheet made of soft flexible materials and accommodating a urine absorbent material for storing urine; and

a top sheet formed as a liquid-permeable and hard-breathable non-woven fabric, covering a top surface of said urine absorbent material and keeping said urine absorbent material highly airtight as well as said outer sheet,

a sealed urine tank;

a urine drainage tube for discharging urine from said urine absorbent material to said urine tank, and made of soft flexible materials;

a vacuum pump for decreasing air pressure in said urine tank; and

a urine sensor provided along said urine drainage tube and electrically conductive in responsive to detecting a urination on the vicinity of one end of said urine drainage tube,

wherein

urine is absorbed into said urine absorbent material through a hole on said top sheet upon wearer's urination,

said urine sensor detects wearer's urination and initiates said vacuum pump, and

said urine is discharged from said urine absorbent material through said urine tube to said urine tank.

19. (New) An automatic urine disposal device of claim 18, wherein

said top sheet is made of non-woven fabric blended with cotton and polypropylene and polyolefin polyester.

20. (New) An automatic urine disposal device according to claim 18, wherein said top sheet has a breathability measured according to the General Textile Testing Method's breathability testing method A prescribed in JIS L 1096, 6.27.1 from 0 to 50 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is moist and from 20 to 100 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is dry.

21. (New) An automatic urine disposal device according to claim 18, wherein said top sheet has a breathability measured according to the General Textile Testing Method's breathability testing method A prescribed in JIS L 1096, 6.27.1 from 0 to 50 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is moist and from 20 to 50 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is dry.

22. A urine receptacle comprising

an outer sheet having a substantially rectangular shape and having a U-shaped cross-section, having a width at the middle portion in the longitudinal direction being narrow, so that it is shaped like an hourglass, and having a gather provided along its periphery, formed of a liquid-impermeable and non-breathable thin sheet made of soft flexible materials and accommodating a urine absorbent material for storing urine; and

a top sheet formed as liquid-permeable and hard-breathable non-woven fabric, covering a top surface of said urine absorbent material and keeping said urine absorbent material highly airtight as well as said outer sheet,

a urine drainage tube for discharging urine from said urine absorbent material to said urine tank, and made of soft flexible materials; and

having

a vacuum pump for decreasing air pressure in said urine tank; and
a urine sensor provided along said urine drainage tube and electrically
conductive in responsive to detecting a urination on the vicinity of one end of said
urine drainage tube,

wherein

urine is absorbed into said urine absorbent material through a hole on said top
sheet upon wearer's urination, and

said urine sensor detects wearer's urination and initiates said vacuum pump.

23. (New) A urine receptacle according to claim 22, wherein said top sheet
has a breathability measured according to the General Textile Testing Method's
breathability testing method A prescribed in JIS L 1096, 6.27.1 from 0 to 50
 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is moist and from 20 to 100 $\text{cm}^3/\text{cm}^2/\text{second}$
when said top sheet is dry.

24. (New) A urine receptacle according to claim 22, wherein said top sheet
has a breathability measured according to the General Textile Testing Method's
breathability testing method A prescribed in JIS L 1096, 6.27.1 from 0 to 50
 $\text{cm}^3/\text{cm}^2/\text{second}$ when said top sheet is moist and from 20 to 50 $\text{cm}^3/\text{cm}^2/\text{second}$
when said top sheet is dry.